

IN THE CLAIMS:

Please amend claims 1, 11, and 15-28, and add claim 29 as follows.

1. (Currently Amended) A method, ~~in a communication system wherein a serving controller is configured to support a first security mechanism and at least one other security mechanism, the method comprising:~~

 sending a request for registration from a user equipment to a serving controller via a second controller, said request for registration including information indicative of at least one security mechanism supported by the user equipment;

 determining, based on the information, in the second controller that the user equipment supports a second security mechanism other than a first security mechanism;

 removing the information from the request for registration in the second controller, including in the request for registration an indication that the second security mechanism is used by the user equipment and forwarding the request for registration including said indication to the serving controller; and

 sending a challenge in accordance with the second security mechanism from the serving controller to the user equipment via the second controller.

2. (Currently Amended) A method as claimed in claim 1, further comprising:

~~including forwarding~~ a response to the challenge in a message from the user equipment to the serving controller.

3. (Original) A method as claimed in claim 2, further comprising:

using the response for authentication of the message at the serving controller.

4. (Currently Amended) A method as claimed in claim 1, further comprising:

~~providing~~ receiving at the second controller comprising a network entity providing proxy call state control functions between the user equipment and the serving controller.

5. (Previously Presented) A method as claimed in claim 1, wherein the sending of the request for registration from the user equipment to the serving controller comprises

sending a challenge from the serving controller to the user equipment, sending a response to the challenge from the user equipment, and

registering the user equipment to the serving controller only if a satisfactory response is received from the user equipment, and sending a further challenge to the user equipment after the registration is completed.

6. (Original) A method as claimed in claim 1, further comprising:

obtaining data for sending the challenge from a user information database.

7. (Previously Presented) A method as claimed in claim 1, wherein the sending of the challenge comprises sending the challenge comprising an authentication vector.

8. (Previously Presented) A method as claimed in claim 1, further comprising:

providing the first security mechanism comprising a security mechanism in accordance with a secure internet protocol.

9. (Previously Presented) A method as claimed in claim 1, further comprising:

providing the second security mechanism comprising a security mechanism in accordance with a hypertext transfer digest protocol.

10. (Previously Presented) A method as claimed in claim 1, further comprising:

sending of at least the challenge or a response in a message in accordance with a session initiation protocol.

11. (Currently Amended) A method as claimed in claim 1, further comprising:

registering the user equipment with a serving controller of an internet ~~multimem~~multimedia subsystem.

12. (Previously Presented) A method as claimed in claim 2, wherein said information comprises a list of security mechanisms supported by the user equipment further comprising:

including in a security-client header of the request for registration the list of security mechanisms supported by the user equipment;

concluding at the second controller based on the list that the user equipment supports the second security mechanism instead of the first security mechanism;

removing the security-client header from the request and including into an authorization header of the request the indication that the second security mechanism is to be used; and

forwarding the request to the serving controller.

13. (Previously Presented) A method as claimed in claim 1, wherein the sending of the challenge comprises sending the challenge to the user equipment in an authentication information header of a message.

14. (Original) A method as claimed in claim 3, further comprising:

providing the message comprising a request for a service provided by an application server.

15. (Currently Amended) A ~~communication-system~~, comprising:

a serving controller configured to accept registrations of user equipments and to support at least two different security mechanisms; and

a second controller ~~unit~~ configured to receive from a user equipment in a request for registration data indicative of at least one security mechanism that the user equipment supports, to remove said data from the request for registration, to provide the serving

controller with information regarding a security mechanism supported by the user equipment that has requested to be registered to the serving controller, and to forward the request for registration to the serving controller, wherein the serving controller is configured to send a challenge in accordance with a determined security mechanism to the user equipment and to authenticate a message from the user equipment based on a response to the challenge included in the message.

16. (Currently Amended) A ~~communication~~-system as claimed in claim 15, wherein the ~~providing unit~~second controller configured to provide information regarding the security mechanism is provided in a second controller.

17. (Currently Amended) A ~~communication~~-system as claimed in claim 16, wherein the second controller comprises a network entity providing proxy call state control functions between the user equipment and the serving controller.

18. (Currently Amended) A ~~communication~~-system as claimed in claim 15, further comprising:

a user information database configured to store data associated with challenges.

19. (Currently Amended) A ~~communication~~-system as claimed in claim 15, wherein the

serving controller is configured to support a security mechanism in accordance with a secure internet protocol.

20. (Currently Amended) A ~~communication~~-system as claimed in claim 15, wherein the serving controller is configured to support a security mechanism in accordance with a hypertext transfer digest protocol.

21. (Currently Amended) A ~~communication~~-system as claimed in claim 15, the communication system comprising an internet multimedia subsystem.

22. (Currently Amended) A ~~communication~~-system as claimed in claim 15, further comprising:

a connection to an application server, wherein a message subjected to authentication by the servicing controller based on the response to the challenge comprises a request for a service provided by the application server.

23. (Currently Amended) A ~~communication~~-system as claimed in claim 15, wherein the message subjected to authentication by the servicing controller based on the response to the challenge comprises a request for registration to the serving controller.

24. (Currently Amended) ~~A proxy controller for a communication system;~~ An apparatus,
comprising:

a receiver configured to receive a request for registration from a user equipment
for forwarding to a serving controller, said request including data indicative of at least
one security mechanism supported by said user equipment; and

a controller configured to determine based on said data a security mechanism
supported by the user equipment that has requested to be registered to the serving
controller, to remove the data from the request for registration in the second controller
before forwarding said request to the serving controller, and to signal information to the
serving controller regarding the security mechanism supported by the user equipment.

25. (Currently Amended) ~~A communication system,~~ comprising:

first sending means for sending a request for registration from a user equipment to
a serving controller via a second controller, said request including information indicative
of at least one security mechanism supported by the user equipment;

determining means for determining, based on the information, in a second
controller that the user equipment supports a second security mechanism other than a first
security mechanism;

removing means for removing at said second controller said data;

second sending means for sending from the second controller to the serving

controller an indication that the second security mechanism other than the first security mechanism is used by the user equipment; and

third sending means for sending a challenge in accordance with the second security mechanism from the serving controller to the user equipment.

26. (Currently Amended) A ~~communication system~~, comprising:

serving controller means for accepting registrations of user equipments and to support at least two different security mechanisms; and

receiving means for receiving from a user equipment in a request for registration data indicative of at least one security mechanism that the user equipment supports, removing said data from the request for registration,

providing means for providing the serving controller with information regarding a security mechanism supported by the user equipment that has requested to be registered to the serving controller, and

forwarding means for forwarding the request for registration to the serving controller,

wherein the serving controller is ~~configured to send~~ means sends a challenge in accordance with a determined security mechanism to the user equipment and to authenticate a message from the user equipment based on a response to the challenge included in the message.

27. (Currently Amended) ~~A proxy controller for a communication system, the proxy controller~~ An apparatus, comprising:

receiving means for receiving a request for registration from a user equipment for forwarding to a serving controller said request including data indicative of at least one security mechanism supported by said user equipment;

determining means for determining, based on said data, a security mechanism supported by the user equipment that has requested to be registered to the serving controller;

removing means for removing the data indicative from the request for registration in the second controller before forwarding said request to the serving controller; and

signalling means for signalling information to the serving controller regarding the security mechanism supported by the user equipment.

28. (Currently Amended) ~~A communication system, comprising:~~

~~a first sending unit~~ user equipment configured to send a request for registration from a user equipment to a serving controller via a second controller, said request including information indicative of at least one security mechanism supported by the user equipment;

~~a determining unit~~ second controller configured to determine, based on the information, in a second controller that the user equipment supports a second security mechanism other than a first security mechanism; ~~a removing unit~~ configured to remove

at said second controller said data; ~~and a second sending unit configured to send from the~~
second controller to the serving controller an indication that the second security
mechanism other than the first security mechanism is used by the user equipment; and

~~a third sending unit~~ the serving controller is configured to send a challenge in
accordance with the second security mechanism from the serving controller to the user
equipment.

29. (New) The apparatus according to claim 24, wherein the controller is further
configured to send a response to the challenge from the user equipment to the serving
controller.

30. (New) The apparatus according to claim 29, wherein the controller is further
configured to use the response for authentication of the message at the serving controller.

31. (New) The apparatus according to claim 24, wherein the second controller
comprises a network entity providing proxy call state control functions between the user
equipment and the serving controller.

32. (New) The apparatus according to claim 24, wherein the controller is further
configured to send a challenge from the serving controller to the user equipment, to send
a response to the challenge from the user equipment, and to register the user equipment to

the serving controller only if a satisfactory response is received from the user equipment, and to send a further challenge to the user equipment after the registration is completed.

33. (New) The apparatus according to claim 24, wherein the controller is further configured to obtain data to send the challenge from a user information database.

34. (New) The apparatus according to claim 24, wherein the controller is further configured to send challenge including an authentication vector.

35. (New) A computer program embodied on a computer readable medium, the computer program being configured to control a processor to perform:

 sending a request for registration from a user equipment to a serving controller via a second controller, said request for registration including information indicative of at least one security mechanism supported by the user equipment;

 determining, based on the information, in the second controller that the user equipment supports a second security mechanism other than a first security mechanism;

 removing the information from the request for registration in the second controller, including in the request for registration an indication that the second security mechanism is used by the user equipment and forwarding the request for registration including said indication to the serving controller; and

sending a challenge in accordance with the second security mechanism from the serving controller to the user equipment via the second controller.